



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,699	12/04/2001	Walter Heinrich Demmer	TI-29005	7266

23494 7590 07/12/2004

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

KOSTAK, VICTOR R

ART UNIT	PAPER NUMBER
----------	--------------

2614

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary

Application No.

10/004,699

Applicant(s)

DEMMER, WALTER HEINRICH

Examiner

Victor R. Kostak

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-16 is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 2, 8, 9, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 2614

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath.

The system of McGrath (noting particularly Figs. 1, 2 and 6) involves converting a (non-specific) signal from analog to digital at an optimum rate by arranging low-order filtering (integration) elements having non-linear coefficients (e.g. col. 3 lines 10-31), resulting in a scaled output signal relative to the input signal (note further col. 5 lines 24-49). Vectors are selected and individually model-tested in order to determine the optimum coefficient values, ultimately to generate the ideal output sample rate and signal-to-distortion ratio (SDR), the coefficients being non-linear (col. 10 lines 19-32).

Although McGrath does not explicitly refer to the vectors as positional vectors, it would have been obvious to one of ordinary skill in the art to consider the vector factor as providing positioning information (from the input to the output) since each vector is selected to determine the appropriate coefficients used to convert the sample rate to its scaled output form, thereby meeting claims 17 and 19.

As for claim 1, since McGrath does not specify nor exclude the type of signal to which practical application is to be given, it would have been obvious to one of ordinary skill in the art to apply the sampling rate conversion to any signal capable of being thus modified, in order to generate an optimally converted signal thereby exhibiting the best characteristics. The disclosed

Art Unit: 2614

circuit arrangement is not dictated by the specific type of signal applied thereto. (It is also pointed out that claim 1 recites the interpolation for video or image signals, indicating intended use).

As for claims 3, 18, 20 and 21, McGrath uses tables to access the non-linear coefficients based on the vector selected (noting Tables 3.2, 3.3; col. 32 lines 20-27 discussing look-up tables and alternative methods).

Regarding claim 4, it would have been obvious (if not inherent) to use a memory to store the initial input signal since stored coefficient values are to be selected and applied thereto in the scaling process.

As for claim 5, temporal scaling is used in the sample rate conversion/selection process.

As for claims 6 and 22, the filter units involve, in one instance shown in Table 3.2, three coefficients per case.

Considering claim 7, it would have been obvious to use a different amount of filter units depending on the degree or accuracy of scaling desired, which would incorporate vectors factors. (McGrath discusses the range of coefficients from which certain ones are selected: col. 10 lines 19-26).

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3. Claims 8-16, 23 and 24 appear allowable over the prior art.

Art Unit: 2614

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.

Application/Control Number: 10/004,699
Art Unit: 2614

Page 5

h. n. b

Victor R. Kostak
Primary Examiner
Art Unit 2614

VRK